San Joaquin Valley
AIR POLLUTION CONTROL DISTRICT

HEALTHY AIR LIVING™

FEB 28 2013

Gerardo C. Rios, Chief
Permits Office
Air Division
U.S. EPA - Region IX
75 Hawthorne St
San Francisco, CA 94105

Re: **Proposed Authority to Construct / Certificate of Conformity (Minor Mod)**
District Facility # S-1326
Project # S-1130231

Dear Mr. Rios:

Enclosed for your review is the District's engineering evaluation of an application for Authority to Construct for Vintage Production California, located at Vintage's Heavy Oil Central Stationary Source, which has been issued a Title V permit. Vintage Production California is requesting that a Certificate of Conformity, with the procedural requirements of 40 CFR Part 70, be issued with this project. The project consists of modifying TEOR permit S-1326-35 by increasing the allowable steam enhanced well count from 100 wells to 250 wells.

Enclosed is the engineering evaluation of this application, a copy of the current Title V permit, and proposed Authority to Construct # S-1326-35-13 with Certificate of Conformity. After demonstrating compliance with the Authority to Construct, the conditions will be incorporated into the facility's Title V permit through an administrative amendment.

Please submit your written comments on this project within the 45-day comment period that begins on the date you receive this letter. If you have any questions, please contact Mr. Leonard Scandura, Permit Services Manager, at (661) 392-5500.

Thank you for your cooperation in this matter.

Sincerely,

for David Warner
Director of Permit Services

Enclosures
cc: Steve Davidson, Permit Services

Seyed Sadredin
Executive Director/Air Pollution Control Officer

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4800 Enterprise Way
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FEB 28 2013

Jerry Frost
Vintage Production California
9600 Ming Avenue
Bakersfield, CA 93311

Re: Proposed Authority to Construct / Certificate of Conformity (Minor Mod)
District Facility # S-1326
Project # S-1130231

Dear Mr. Frost:

Enclosed for your review is the District's analysis of your application for Authority to Construct for the facility identified above. You have requested that a Certificate of Conformity with the procedural requirements of 40 CFR Part 70 be issued with this project. The project consists of modifying TEOR permit S-1326-35 by increasing the allowable steam enhanced well count from 100 wells to 250 wells.

After addressing any EPA comments made during the 45-day comment period, the Authority to Construct will be issued to the facility with a Certificate of Conformity. Prior to operating with modifications authorized by the Authority to Construct, the facility must submit an application to modify the Title V permit as an administrative amendment, in accordance with District Rule 2520, Section 11.5.

If you have any questions, please contact Mr. Leonard Scandura, Permit Services Manager, at (661) 392-5500.

Thank you for your cooperation in this matter.

Sincerely,

David Warner
Director of Permit Services

Enclosures
cc: Steve Davidson, Permit Services

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San Joaquin Valley Air Pollution Control District

Authority to Construct Application Review

TEOR Operation

Facility Name:	Vintage Production California, LLC	Date:	February 19, 2013
Mailing Address:	9600 Ming Avenue Bakersfield, CA 93311	Engineer:	Steve Davidson
		Lead Engineer:	Rich Karrs
Contact Person:	Jerry Frost		
Telephone:	(661) 869-8179		
E-Mail:	Jerry_Frost@oxy.com		
Application #(s):	S-1326-35-13		
Project #:	S-1130231		
Deemed Complete:	February 7, 2013		

RWK 2-25-13

I. Proposal

Vintage Production California LLC (Vintage) requests an Authority to Construct (ATC) permit for the following modification of an existing Thermally Enhanced Oil Recovery (TEOR) operation:

- Modify TEOR permit S-1326-35 to increase the steam enhanced well count from 100 wells to 150 steam enhanced wells.

Vintage Production California, LLC has a Title V Permit. This modification can be classified as a Title V minor modification pursuant to Rule 2520, and can be processed with a Certificate of Conformity (COC). Since the facility has specifically requested that this project be processed in that manner, the 45-day EPA comment period will be satisfied prior to the issuance of the Authority to Construct. Vintage must apply to administratively amend their Title V permit.

II. Applicable Rules

Rule 2201	New and Modified Stationary Source Review Rule (4/21/11)
Rule 2410	Prevention of Significant Deterioration (6/16/11)
Rule 2520	Federally Mandated Operating Permits (6/21/01)
Rule 4001	New Source Performance Standards (4/14/99)
Rule 4002	National Emissions Standards for Hazardous Air Pollutants (5/20/04)
Rule 4101	Visible Emissions (2/17/05)
Rule 4102	Nuisance (12/17/92)
Rule 4401	Steam Enhanced Crude Oil Production Well Vents (6/16/11)
CH&SC 41700	Health Risk Assessment
CH&SC 42301.6	School Notice

Public Resources Code 21000-21177: California Environmental Quality Act (CEQA)
California Code of Regulations, Title 14, Division 6, Chapter 3, Sections 15000-15387: CEQA Guidelines

III. Project Location

The new wells will be located in Vintage's Heavy Oil Central Stationary Source within the Kern Front Oil Field and various locations within the Township 28S, Range 27E. The equipment is not located within 1,000 feet of the outer boundary of a K-12 school. Therefore, the public notification requirement of California Health and Safety Code 42301.6 is not applicable to this project.

IV. Process Description

Steam generators are used to provide high quality steam for injection into heavy crude oil production zones. The heat added by the steam reduces the viscosity of the crude oil making it easier to produce.

Production wells will be equipped with closed casing vents or vented to a vapor control system. Vapors collected by the vapor control system will be piped to a DOGGR disposal well, and flare, or discharged to H2S scrubber prior to vapor combustion in flare or in steam generators S-1326-9, '-294, '-314, '-337, and '-338.

Like all existing wells on the Section 23 leases, the wells being added will produce heavy crude oil (API gravity less than 20°) and water. The new wells will also be subject to the existing requirement that all components in vapor service exclusively handle vapor streams with less than 10% by weight VOC. The components required for the tie-in of wells, valves, flanges, connections, stuffing boxes, etc. will be assigned zero emissions in accordance with District policy SSP 2015. This policy stipulates that components in heavy oil liquid service and components in vapor service with streams having less than 10% VOC will not be assessed VOC emissions.

V. Equipment Listing

Pre-Project Equipment Description:

S-1326-35-12: THERMALLY ENHANCED OIL RECOVERY OPERATION WITH WELL VENT VAPOR CONTROL SYSTEM SERVING 150 STEAM ENHANCED WELLS, INCLUDING 50 HP COMPRESSOR, ONE AIR-COOLED VAPOR CONDENSER, AND PIPING TO FIELD FUEL GAS SYSTEM, DOGGR DISPOSAL WELL, AND/OR 3.6 MMBTU/HR KALDAIR FLARE INCLUDING TWO 8000 LB SULFATREAT CANISTERS (ONE AS BACKUP) (SECTION 14 YOUNG)

Proposed Modification:

Increase the number of thermally enhanced oil wells by 100 wells for a total of 250 wells

S-1326-35-13: MODIFICATION OF THERMALLY ENHANCED OIL RECOVERY OPERATION WITH WELL VENT VAPOR CONTROL SYSTEM SERVING 150

STEAM ENHANCED WELLS, INCLUDING 50 HP COMPRESSOR, ONE AIR-COOLED VAPOR CONDENSER, AND PIPING TO FIELD FUEL GAS SYSTEM, DOGGR DISPOSAL WELL, AND/OR 3.6 MMBTU/HR KALDAIR FLARE INCLUDING TWO 8000 LB SULFATREAT CANISTERS (ONE AS BACKUP) (SECTION 14 YOUNG): INCREASE THE WELL COUNT BY 100 WELLS TO A TOTAL OF 250 WELLS

Post Project Equipment Description:

S-1326-35-13: THERMALLY ENHANCED OIL RECOVERY OPERATION WITH WELL VENT VAPOR CONTROL SYSTEM SERVING 250 STEAM ENHANCED WELLS, INCLUDING 50 HP COMPRESSOR, ONE AIR-COOLED VAPOR CONDENSER, AND PIPING TO FIELD FUEL GAS SYSTEM, DOGGR DISPOSAL WELL, AND/OR 3.6 MMBTU/HR KALDAIR FLARE INCLUDING TWO 8000 LB SULFATREAT CANISTERS (ONE AS BACKUP) (SECTION 14 YOUNG)

VI. Emission Control Technology Evaluation

The existing vapor recovery system has been shown to be very effective in controlling emissions from well head casing vents, demonstrating a VOC reduction efficiency of greater than > 99% from the uncontrolled level. The collected vapor is disposed of downhole or burned in devices approved for that purpose. There will be no change in emission control technology; therefore, no further discussion is required.

VII. General Calculations

A. Assumptions

- VOC content of hydrocarbons in the gas stream are < 10% by weight. In accordance with District SSP 2015 policy "Quantifying Fugitive VOC Emissions at Petroleum and SOCMI Facilities", VOC emissions are not assessed to piping and components handling vapor streams with a VOC content of 10% or less by weight and condensate streams having a water content greater than 50%. Therefore, fugitive emissions components do not emit VOCs.
- There are no changes to flare's operation

C. Calculations

1. Pre-Project Potential to Emit (PE1)

As stated above, there are no fugitive emissions associated with this project.

PE1 from Flare Listed on the Permit*		
	Daily Emissions (lb/day)	Annual Emissions (lb/year)
NO_X	10.2	3,723
SO_X	9.5	3,468
PM_{10}	55.5	20,258
CO	1.2	438
VOC	0.4	146

*From Project S1326, 1095593

2. Post Project Potential to Emit (PE2)

There is no proposed or expected change in emissions from this project; therefore,
PE2 = PE1

PE2 from Flare Listed on the Permit		
	Daily Emissions (lb/day)	Annual Emissions (lb/year)
NO_X	10.2	3,723
SO_X	9.5	3,468
PM_{10}	55.5	20,258
CO	1.2	438
VOC	0.4	146

3. Pre-Project Stationary Source Potential to Emit (SSPE1)

Pursuant to District Rule 2201, the SSPE1 is the Potential to Emit (PE) from all units with valid Authorities to Construct (ATC) or Permits to Operate (PTO) at the Stationary Source and the quantity of Emission Reduction Credits (ERC) which have been banked since September 19, 1991 for Actual Emissions Reductions (AER) that have occurred at the source, and which have not been used on-site.

The SSPE1 can be calculated by adding the PE1 from all units with valid ATCs or PTOs and the sum of the ERCs that have been banked at the source and which have not been used on-site ($Total_{ERC}$).

$SSPE1_{Total} = SSPE1_{Permit\ Unit} + Total_{ERC}$

SSPE1 (lb/year)[1]					
Permit Unit/ERC	NO_X	SO_X	PM_{10}	CO	VOC
$SSPE1_{Permit\ Unit}$	>120,000	43,240	42,610	>250,000	>1,000,000
$SSPE1_{ERC}$	--	306	156	--	--
SSPE1	>120,000	43,546	42,766	>250,000	>1,000,000

[1] SSPE2 from Project S1326, 1124099

4. Post Project Stationary Source Potential to Emit (SSPE2)

Pursuant to District Rule 2201, the SSPE2 is the PE from all units with valid ATCs or PTOs at the Stationary Source and the quantity of ERCs which have been banked since September 19, 1991 for AER that have occurred at the source, and which have not been used on-site.

There is no proposed change in emissions for this project; therefore, SSPE2 = SSPE1

SSPE2 (lb/year)					
Permit Unit/ERC	NO_X	SO_X	PM_{10}	CO	VOC
SSPE2	>120,000	43,546	42,766	>250,000	>1,000,000

5. Major Source Determination

Rule 2201 Major Source Determination:

Pursuant to District Rule 2201, a Major Source is a stationary source with a SSPE2 equal to or exceeding one or more of the following threshold values. For the purposes of determining major source status the following shall not be included:

- any ERCs associated with the stationary source
- Emissions from non-road IC engines (i.e. IC engines at a particular site at the facility for less than 12 months)
- Fugitive emissions, except for the specific source categories specified in 40 CFR 51.165

Rule 2201 Major Source Determination (lb/year)					
	NO_X	SO_X	PM_{10}	CO	VOC
Facility emissions pre-project	>20,000	43,546	42,766	>200,000	>20,000
Facility emissions – post project	>20,000	43,546	42,766	>200,000	>20,000
Major Source Threshold	20,000	140,000	140,000	200,000	20,000
Major Source?	Yes	No	No	Yes	Yes

As seen in the table above, the facility is an existing Major Source for NOx, CO and VOC, and is not a Major Source for SO_X and PM_{10}. The source is not becoming a Major Source for SO_X and PM_{10} as a result of this project.

Rule 2410 Major Source Determination:

The facility or the equipment evaluated under this project is listed as one of the categories specified in 40 CFR 52.21 (b)(1)(i). Therefore the following PSD Major Source thresholds are applicable.

PSD Major Source Determination (tons/year)							
	NO2	VOC	SO2	CO	PM	PM10	CO2e
Estimated Facility PE before Project Increase	60	--	21.6	125	21.3	21.3	>100,000
PSD Major Source Thresholds	100	100	100	100	100	100	100,000
PSD Major Source ? (Y/N)	N	N	N	Y	N	N	Y

As shown above, the facility is an existing major source for PSD for at least one pollutant. Therefore the facility is an existing major source for PSD.

6. Baseline Emissions (BE)

The BE calculation (in lbs/year) is performed pollutant-by-pollutant for each unit within the project to calculate the QNEC, and if applicable, to determine the amount of offsets required.

Pursuant to District Rule 2201, BE = PE1 for:

- Any unit located at a non-Major Source,
- Any Highly-Utilized Emissions Unit, located at a Major Source,
- Any Fully-Offset Emissions Unit, located at a Major Source, or
- Any Clean Emissions Unit, located at a Major Source.

otherwise,

BE = Historic Actual Emissions (HAE), calculated pursuant to District Rule 2201.

Pursuant to Rule 2201, a Clean Emissions Unit is defined as an emissions unit that is "equipped with an emissions control technology with a minimum control efficiency of at least 95% or is equipped with emission control technology that meets the requirements for achieved-in-practice BACT as accepted by the APCO during the five years immediately prior to the submission of the complete application.

This wells are equipped with a vapor control system with a control 99% efficiency. Therefore, the units are clean emissions units and BE = PE1.

7. SB 288 Major Modification

SB 288 Major Modification is defined in 40 CFR Part 51.165 as "any physical change in or change in the method of operation of a major stationary source that would result in a significant net emissions increase of any pollutant subject to regulation under the Act."

Since this source is not included in the 28 specific source categories specified in 40 CFR 51.165, the, increases in fugitive emissions are not included in the SB 288 Major

Modification calculation. Therefore, this project does not result ins a SB288 Major Modifications.

8. Federal Major Modification

Since this source is not included in the 28 specific source categories specified in 40 CFR 51.165, the increases in fugitive emissions are not included in the Federal Major Modification determination. Therefore, this project is not a Federal major Modification.

9. Rule 2410 – Prevention of Significant Deterioration (PSD) Applicability Determination

Rule 2410 applies to pollutants for which the District is in attainment or for unclasssified, pollutants. The pollutants addressed in the PSD applicability determination are listed as follows:

- NO2 (as a primary pollutant)
- SO2 (as a primary pollutant)
- CO
- PM
- PM10
- Greenhouse gases (GHG): CO2, N2O, CH4, HFCs, PFCs, and SF6

The first step of this PSD evaluation consists of determining whether the facility is an existing PSD Major Source or not (See Section VII.C.5 of this document).

In the case the facility is an existing PSD Major Source, the second step of the PSD evaluation is to determine if the project results in a PSD significant increase.

In the case the facility is NOT an existing PSD Major Source but is an existing source, the second step of the PSD evaluation is to determine if the project, by itself, would be a PSD major source.

In the case the facility is new source, the second step of the PSD evaluation is to determine if this new facility will become a new PSD major Source as a result of the project and if so, to determine which pollutant will result in a PSD significant increase.

I. Project Location Relative to Class 1 Area

As demonstrated in the "PSD Major Source Determination" Section above, the facility was determined to be a existing major source for PSD. Because the project is not located within 10 km of a Class 1 area – modeling of the emission increase is not required to determine if the project is subject to the requirements of Rule 2410.

II. Significance of Project Emission Increase Determination

a. Potential to Emit of attainment/unclassified pollutant for New or Modified Emission Units vs PSD Significant Emission Increase Thresholds

As a screening tool, the potential to emit from all new and modified units is compared to the PSD significant emission increase thresholds, and if total potential to emit from all new and modified units is below this threshold, no futher analysis will be needed.

PSD Significant Emission Increase Determination: Potential to Emit (tons/year)						
	NO2	SO2	CO	PM	PM10	CO2e
Total PE from New and Modified Units	0	0	0	0	0	237*
PSD Significant Emission Increase Thresholds	40	40	100	25	15	75,000
PSD Significant Emission Increase?	N	N	N	N	N	N

*See Appendix B

As demonstrated above, because the project has a total potential to emit from all new and modified emission units below the PSD significant emission increase thresholds, this project is not subject to the requirements of Rule 2410 due to a significant emission increase and no further discussion is required.

10. Quarterly Net Emissions Change (QNEC)

The QNEC is calculated solely to establish emissions that are used to complete the District's PAS emissions profile screen. Detailed QNEC calculations are included in Appendix C.

VIII. Compliance

Rule 2201 New and Modified Stationary Source Review Rule

A. Best Available Control Technology (BACT)

1. BACT Applicability

BACT requirements are triggered on a pollutant-by-pollutant basis and on an emissions unit-by-emissions unit basis. Unless specifically exempted by Rule 2201, BACT shall be required for the following actions*:

a. Any new emissions unit with a potential to emit exceeding two pounds per day,

b. The relocation from one Stationary Source to another of an existing emissions unit with a potential to emit exceeding two pounds per day,
c. Modifications to an existing emissions unit with a valid Permit to Operate resulting in an AIPE exceeding two pounds per day, and/or
d. Any new or modified emissions unit, in a stationary source project, which results in an SB 288 Major Modification or a Federal Major Modification, as defined by the rule.

*Except for CO emissions from a new or modified emissions unit at a Stationary Source with an SSPE2 of less than 200,000 pounds per year of CO.

a. New emissions units – PE > 2 lb/day

As discussed in Section I above, there are no new emissions units associated with this project. Therefore, BACT for new units with PE > 2 lb/day purposes is not triggered.

b. Relocation of emissions units – PE > 2 lb/day

As discussed in Section I above, there are no emissions units being relocated from one stationary source to another; therefore, BACT is not triggered.

c. Modification of emissions units – AIPE > 2 lb/day

AIPE = PE2 – HAPE

Where,

AIPE = Adjusted Increase in Permitted Emissions, (lb/day)
PE2 = Post-Project Potential to Emit, (lb/day)
HAPE = Historically Adjusted Potential to Emit, (lb/day)

HAPE = PE1 x (EF2/EF1)

Where,

PE1 = The emissions unit's PE prior to modification or relocation, (lb/day)
EF2 = The emissions unit's permitted emission factor for the pollutant after modification or relocation. If EF2 is greater than EF1 then EF2/EF1 shall be set to 1
EF1 = The emissions unit's permitted emission factor for the pollutant before the modification or relocation

AIPE = PE2 – (PE1 * (EF2 / EF1))

For the TEOR wells:
PE2 = PE1 = 0.0 lbs/day
EF2 = EF1
and
AIPE = 0.0 lbs/day

As demonstrated above, the AIPE is not greater than 2.0 lb/day for PM_{10} emissions for any baghouse. Therefore, BACT is not triggered.

d. SB 288/Federal Major Modification

As discussed in Sections VII.C.7 and VII.C.8 above, this project does not constitute an SB 288 and/or Federal Major Modification. Therefore, BACT is not triggered for any pollutant.

B. Offsets

1. Offset Applicability

Offset requirements shall be triggered on a pollutant by pollutant basis and shall be required if the SSPE2 equals to or exceeds the offset threshold levels in Table 4-1 of Rule 2201.

The SSPE2 is compared to the offset thresholds in the following table.

Offset Determination (lb/year)					
	NO_X	SO_X	PM_{10}	CO	VOC
SSPE2	>20,000	43,546	>29,200	>200,000	>20,000
Offset Thresholds	20,000	54,750	29,200	200,000	20,000
Offsets triggered?	Yes	No	Yes	Yes	Yes

2. Quantity of Offsets Required

As seen above, the SSPE2 is greater than the offset thresholds for NO_X, PM_{10}, CO, and VOC. Therefore offset calculations will be required for this project.

The quantity of offsets in pounds per year is calculated as follows for sources with an SSPE1 greater than the offset threshold levels before implementing the project being evaluated.

Offsets Required (lb/year) = (Σ[PE2 – BE] + ICCE) x DOR, for all new or modified emissions units in the project,

Where,
PE2 = Post Project Potential to Emit, (lb/year)
BE = Baseline Emissions, (lb/year)
ICCE = Increase in Cargo Carrier Emissions, (lb/year)
DOR = Distance Offset Ratio, determined pursuant to Section 4.8

BE = PE1 for:

- Any unit located at a non-Major Source,
- Any Highly-Utilized Emissions Unit, located at a Major Source,

- Any Fully-Offset Emissions Unit, located at a Major Source, or
- Any Clean Emissions Unit, Located at a Major Source.

otherwise,

BE = HAE

There are no Pre or Post Project emissions associated with this project; therefore, offsets are not required.

C. Public Notification

1. Applicability

Public noticing is required for:
a. New Major Sources, Federal Major Modifications, and SB 288 Major Modifications,
b. Any new emissions unit with a Potential to Emit greater than 100 pounds during any one day for any one pollutant,
c. Any project which results in the offset thresholds being surpassed, and/or
d. Any project with an SSIPE of greater than 20,000 lb/year for any pollutant.

a. New Major Sources, Federal Major Modifications, and SB 288 Major Modifications

New Major Sources are new facilities, which are also Major Sources. Since this is not a new facility, public noticing is not required for this project for New Major Source purposes.

As demonstrated in sections VII.C.7 and VII.C.8, this project does not constitute an SB 288 or Federal Major Modification; therefore, public noticing for SB 288 or Federal Major Modification purposes is not required.

b. PE > 100 lb/day

Applications which include a new emissions unit with a PE greater than 100 pounds during any one day for any pollutant will trigger public noticing requirements. There are no new emissions units associated with this project. Therefore public noticing is not required for this project for PE > 100 lb/day.

c. Offset Threshold

The SSPE1 and SSPE2 are compared to the offset thresholds in the following table.

Offset Thresholds				
Pollutant	SSPE1 (lb/year)	SSPE2 (lb/year)	Offset Threshold	Public Notice Required?
NO_X	>20,000	>20,000	20,000 lb/year	No
SO_X	43,240	43,240	54,750 lb/year	No
PM_{10}	>29,200	>29,200	29,200 lb/year	No
CO	>200,000	>200,000	200,000 lb/year	No
VOC	>20,000	>20,000	20,000 lb/year	No

As detailed above, there were no thresholds surpassed with this project; therefore public noticing is not required for offset purposes.

d. SSIPE > 20,000 lb/year

Public notification is required for any permitting action that results in a SSIPE of more than 20,000 lb/year of any affected pollutant. According to District policy, the SSIPE = SSPE2 – SSPE1. The SSIPE is compared to the SSIPE Public Notice thresholds in the following table.

SSIPE Public Notice Thresholds					
Pollutant	Project PE2 (lb/year)	Project PE1 (lb/year)	SSIPE (lb/year)	SSIPE Public Notice Threshold	Public Notice Required?
NO_x	0	0	0	20,000 lb/year	No
SO_x	0	0	0	20,000 lb/year	No
PM_{10}	0	0	0	20,000 lb/year	No
CO	0	0	0	20,000 lb/year	No
VOC	0	0	0	20,000 lb/year	No

As demonstrated above, the SSIPEs for all pollutants were less than 20,000 lb/year; therefore public noticing for SSIPE purposes is not required.

2. Public Notice Action

As discussed above, this project will not result in emissions, for any pollutant, which would subject the project to any of the noticing requirements listed above. Therefore, public notice will not be required for this project.

D. Daily Emission Limits (DELs)

DELs and other enforceable conditions are required by Rule 2201 to restrict a unit's maximum daily emissions, to a level at or below the emissions associated with the maximum design capacity. The DEL must be contained in the latest ATC and contained in or enforced by the latest PTO and enforceable, in a practicable manner, on a daily basis. DELs are also required to enforce the applicability of BACT.

Proposed Rule 2201 (DEL) Conditions:

- Well vent vapors shall vent to the field fuel gas system, DOGGR approved injection wells, flare listed on permit S-1326-260, or steam generators S-1326-9, '-294, '-295, '-314, '-337, and '-338. [District Rule 2201]

- VOC content of well vent vapor gas shall not exceed 10% by weight. If the VOC content of the well vent vapor gas is less than 10% by weight for 8 consecutive quarterly samplings per District approved plan, sampling frequency shall only be required annually. Representative samples shall be collected during periods of normal operation and not be within 48 hours after routine maintenance or repair. Records of test shall be maintained for a period of five years and be made readily available for District inspection upon request. [District Rule 2201]

- Collected vapors shall discharge to H2S scrubber prior to vapor combustion in flare or bypass to steam generators S-1326-9, '-294, '-295, '-314, '-337, and '-338. [District Rule 2201]

- Well head casing vent collection piping network shall be limited to 150 steam enhanced wells. [District Rule2201]

E. Compliance Assurance

1. Source Testing

Pursuant to District Policy APR 1705, source testing is not required to demonstrate compliance with Rule 2201.

2. Monitoring

An ongoing component inspection and repair program consistent with the requirement of Rule 4401 is currently being implemented. The newly added steam enhanced wells will be subject to this program.

3. Recordkeeping

Recordkeeping is required to demonstrate compliance with the offset, public notification and daily emission limit requirements of Rule 2201. The following condition(s) are listed on the permit to operate:

- The operator shall maintain monitoring records of the date and well identification where steam injection or well stimulation occurs.. [District Rule 2201 and 4401]

- All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. . [District Rule 2201 snf 4401]

4. Reporting

No reporting is required to demonstrate compliance with Rule 2201.

Rule 2410 Prevention of Significant Deterioration

As demonstrated above, because the project has a total potential to emit from all new and modified emission units below the PSD significant emission increase thresholds, this project is not subject to the requirements of Rule 2410 due to a significant emission increase and no further discussion is required.

Rule 2520 Federally Mandated Operating Permits

This facility is subject to this Rule, and has received their Title V Operating Permit. The proposed modification is a Minor Modification to the Title V Permit.

In accordance with Rule 2520, these modifications:

1. Do not violate requirements of any applicable federally enforceable local or federal requirement;
2. Do not relax monitoring, reporting, or recordkeeping requirements in the permit and are not significant changes in existing monitoring permit terms or conditions;
3. Do not require or change a case-by-case determination of an emission limitation or other standard, or a source-specific determination for temporary sources of ambient impacts, or a visibility or increment analysis;
4. Do not seek to establish or change a permit term or condition for which there is no corresponding underlying applicable requirement and that the source has assumed to avoid an applicable requirement to which the source would otherwise be subject. Such terms and conditions include:
   a. A federally enforceable emission cap assumed to avoid classification as a modification under any provisions of Title I of the Federal Clean Air Act; and
   b. An alternative emissions limit approved pursuant to regulations promulgated under section 112(i)(5) of the Federal Clean Air Act; and
5. Are not Title I modifications as defined in District Rule 2520 or modifications as defined in section 111 or 112 of the Federal Clean Air Act; and
6. Do not seek to consolidate overlapping applicable requirements.

As discussed above, the facility has applied for a Certificate of Conformity (COC). Therefore, the facility must apply to modify their Title V permit with an administrative amendment, prior to operating with the proposed modifications. Continued compliance with this rule is expected. The facility may construct/operate under the ATC upon submittal of the Title V administrative amendment application.

Rule 4001 New Source Performance Standards (NSPS)

This rule incorporates NSPS from Part 60, Chapter 1, Title 40, Code of Federal Regulations (CFR); and applies to all new sources of air pollution and modifications of existing sources of

air pollution listed in 40 CFR Part 60. However, no subparts of 40 CFR Part 60 apply to thermally enhanced oil recovery operations.

Rule 4002 National Emission Standards for Hazardous Air Pollutants (NESHAPs)

This rule incorporates NESHAPs from Part 61, Chapter I, Subchapter C, Title 40, CFR and the NESHAPs from Part 63, Chapter I, Subchapter C, Title 40, CFR; and applies to all sources of hazardous air pollution listed in 40 CFR Part 61 or 40 CFR Part 63. However, no subparts of 40 CFR Part 61 or 40 CFR Part 63 apply to thermally enhanced oil recovery operations.

Rule 4101 Visible Emissions

District Rule 4101, Section 5.0, indicates that no air contaminant shall be discharged into the atmosphere for a period or periods aggregating more than three minutes in any one hour, which is dark or darker than Ringlemann 1 or equivalent to 20% opacity. Compliance with the requirements of this rule is expected.

Rule 4102 Nuisance

Rule 4102 prohibits discharge of air contaminants which could cause injury, detriment, nuisance or annoyance to the public. Public nuisance conditions are not expected as a result of these operations, provided the equipment is well maintained. Therefore, compliance with this rule is expected.

California Health & Safety Code 41700 (Health Risk Assessment)

An HRA is not required for a project with a total facility prioritization score of less than one. According to the Technical Services Memo for this project (**Appendix D**), the total facility prioritization score including this project was greater than one. Therefore, an HRA was required to determine the short-term acute and long-term chronic exposure from this project.

The cancer risk for this project is shown below:

HRA Summary		
Unit	Cancer Risk	T-BACT Required
S-1326-35-13	0.46 per million	No

Discussion of T-BACT

BACT for toxic emission control (T-BACT) is required if the cancer risk exceeds one in one million. As demonstrated above, T-BACT is not required for this project because the HRA indicates that the risk is not above the District's thresholds for triggering T-BACT requirements; therefore, compliance with the District's Risk Management Policy is expected.

District policy APR 1905 also specifies that the increase in emissions associated with a proposed new source or modification not have acute or chronic indices, or a cancer risk greater than the District's significance levels (i.e. acute and/or chronic indices greater than 1 and a cancer risk greater than 10 in a million). As outlined by the HRA Summary in Appendix D of this report, the emissions increases for this project was determined to be less than significant.

Rule 4401 Steam Enhanced Crude Oil Production Well Vents

The purpose of this rule is to limit the VOC emissions from steam-enhanced crude oil production well vents. This rule is applicable to all steam-enhanced crude oil production wells and any associated vapor collection and control systems.

Section 3.0, Definitions

Section 3.20.2 defines leak as: the dripping of VOC-containing liquid or the detection of a concentration of total organic compound, above background, determined according to the test method specified in Section 6.3.3 that exceeds the values specified in Table 1, Section 3.20.2.1 and Section 3.20.2.2 of this rule. Any liquid or gas coming from a component undergoing repair or replacement, or during sampling of process fluid from a component into a container is not considered a leak provided such activities are done as expeditiously as possible and with minimal spillage of material and VOC emissions to the atmosphere.

Table 1 Rule 4401 Gas Leak in ppmv as Methane		
Type of Components	Major Gas Leak	Minor Gas Leak
1. PRDs	Greater than 10,000	400 to 10,000
2. Components other than PRDs	Greater than 10,000	2,000 to 10,000

Section 3.20.2.1 defines Major Liquid Leak as: a visible mist or a continuous flow of liquid that is not seal lubricant.

Section 3.20.2.2 defines Minor Liquid Leak as: a liquid leak, except seal lubricant, that is not a major liquid leak and drips liquid at a rate of more than three drops per minute.

Therefore, the following conditions are listed on the ATC to ensure compliance:

- A gas leak is defined as the detection of a concentration of total organic compounds, above background (measured in accordance with EPA Method 21) that exceeds the following values: 1) A major gas leak is a detection of greater than 10,000 ppmv as methane; and 2) A minor gas leak is a detection of 400 to 10,000 ppmv as methane for pressure relief devices (PRDs) and 2,000 to 10,000 for components other than PRDs. [District Rule 4401]

- A liquid leak is defined as the dripping of VOC-containing liquid. A major liquid leak is a visible mist or a continuous flow of liquid that is not seal lubricant. A minor liquid leak is a liquid leak that is not a major liquid leak and drips liquid at a rate of more than three drops per minute, except for seal lubricant. [District Rule 4401]

Section 4.0, Exemptions

Section 4.1 states that any steam-enhanced crude oil production well undergoing service or repair during the time the well is not producing is exempt from the requirements of this Rule. Therefore, the following condition will be listed on the ATC to ensure compliance:

- During the time any steam-enhanced crude oil production well is undergoing service or repair while the well is not producing, it shall be exempt from the emission control requirements of District Rule 4401, 5.0 (as amended December 14, 2006). [District Rule 4401]

Section 5.0, Requirements

Sections 5.1 require that no person shall operate a steam-enhanced crude oil production well, unless the uncontrolled VOC emissions from any well vent are reduced by at least 99% by weight, or if several steam-enhanced crude oil production well vents are connected to a vapor collection and control system, total uncontrolled VOC emissions shall be reduced by at least 99%. Therefore, the following condition will be listed on the ATC to ensure compliance:

- {1298} The uncontrolled VOC emissions from any well vent shall be reduced by at least 99 percent by weight or, if several steam-enhanced crude oil production well vents are connected to a vapor collection and control system, total uncontrolled VOC emissions shall be reduced by at least 99 percent. [District Rule 4401]

Section 5.2 requires that all components of a well vent vapor collection and control system shall be maintained in good repair. A total number of leaks is a violation of this rule if it exceeds the number of allowable leaks. Vapor collection and control systems serving 501 or more wells shall be determined to be in violation of the number of allowable leaks if more than one (1) leak is detected for each 20 wells tested with a minimum of 50 wells tested.

Rule 4401 Allowable Number of Leaks	
Number of Steam Enhanced Crude Oil Production Wells Connected to a Vapor Collection and Control System	Number of Allowable Leaks
Up to and including 25	3
26 to 50	6
51 to 100	8
101 to 250	10
251 to 500	15

Therefore, the following conditions will be listed on the ATC to ensure compliance:

- The following conditions shall be used to determination of a violation: 1) Existence of an open-ended line or a valve located at the end of the line that is not sealed with a blind flange, plug, cap, or a second closed valve that is not closed at all times, except during attended operations requiring process fluid flow through the open-ended lines. Attended operations include draining or degassing operations, connection of temporary process equipment, sampling of process streams, emergency venting, and other normal operational needs, provided such operations are done as expeditiously as possible and with minimal spillage of material and VOC emissions to the atmosphere; 2) Existence of a component with a major liquid leak; 3) Existence of a component with a gas leak greater than 50,000 ppmv; or 4) Existence of a component leak consisting of a minor liquid or gas leak, or a gas leak greater than 10,000 ppmv up to 50,000 ppmv, in excess of the allowable number of leaks specified in Table 3 of Rule 4401. [District Rule 4401] Y

- Total number of leaks from the vapor collection and control system, including condensate handling, shall not exceed the number as allowed by Rule 4401 (as amended December 14, 2006) at any one time. [District Rule 4401]

Section 5.3.1 requires that an operator, upon detection of a leak, shall affix a readily visible tag bearing the date and time of leak detection, the date and time of leak measurement, the leak concentration of gaseous leaks (in ppmv), for liquid leaks whether it is a major liquid leak or a minor liquid leak, and whether the component is an essential component, an unsafe-to monitor component, The tag shall remain in place until the leaking component is repaired, re-inspected, using the test method in Section 6.3.3, and the component is found to be in compliance with the requirements of this rule. Failure to repair a leak within the timeframes listed in this Rule shall constitute a violation of this rule. Therefore, the following condition will be listed on the ATC to ensure compliance:

- {1302} Operator shall affix a readily visible tag bearing the date and time of leak detection, the date and time of leak measurement, the leak concentration of gaseous leaks (in ppmv), for liquid leaks whether it is a major liquid leak or a minor liquid leak, and whether the component is an essential component, an unsafe-to monitor component, or a critical component leak.
- The tag shall remain in place until the leaking component is repaired, re-inspected, using the test method in Section 6.3.3, and the component is found to be in compliance with the requirements of this rule. [District Rule 4401]
- An operator shall minimize a component leak in order to stop or reduce leakage to the atmosphere immediately to the extent possible, but not later than one (1) hour after detection of the leak. [District Rule 4401]
- Except for leaking critical components or leaking essential components, the operator shall repair each leak within time specified in Table 3, of Rule 4401. [District Rule 4401]

Section 5.3.1 requires that an operator shall not use any component with a leak as defined in Section 3.0, or that is found to be in violation of the provisions of Section 5.2.2. However, components that were found leaking may be used provided such leaking components have been identified with a tag for repair, are repaired, or awaiting re-inspection after being repaired

within the applicable time frame specified in Section 5.5 of this rule. The following condition will be place on the permit to ensure compliance:

- The operator shall not use any components that leak in excess of the applicable leak standards as specified in this permit. Components that have been found leaking in excess of the applicable leak standards of this rule may be used provided such leaking components have been identified with a tag for repair, are repaired, or are awaiting re-inspection after being repaired, within the applicable time period specified in this permit. [District Rule 4401] Y

Section 5.3.2 requires each hatch shall be closed at all times except during sampling or adding of process material through the hatch, or during attended repair, replacement, or maintenance operations, provided such activities are done as expeditiously as possible with minimal spillage of material and VOC emissions to the atmosphere. Therefore, the following condition will be listed on the ATC to ensure compliance:

- Each hatch shall be closed at all times except during sampling or adding of process material through the hatch, or during attended repair, replacement, or maintenance operations, provided such activities are done as expeditiously as possible with minimal spillage of material and VOC emissions to the atmosphere. [District Rule 4401]

Section 5.4 requires the following inspection and re-inspection Requirement:

- Except for pipes and unsafe-to-monitor components, an operator shall inspect all other components pursuant to the requirements of Section 6.3.3 at least once every year. [District Rule 4401]
- An operator shall visually inspect all pipes at least once every year. Any visual inspection of pipes that indicates a leak that cannot be immediately repaired to meet the leak standards of this rule shall be inspected within 24 hours after detecting the leak. If a leak is found, the leak shall be repaired as soon as practicable but not later than the time frame specified in Table 3 of this rule.
- An operator shall audio-visually (by hearing and by sight) inspect for leaks all accessible operating pumps, compressors, and PRDs in service at least once each calendar week.
- Any audio-visual inspection of an accessible operating pump, compressor, and PRD performed by an operator that indicates a leak that cannot be immediately repaired to meet the leak standards of this rule shall be inspected not later than 24 hours after conducting the audio-visual inspection. If a leak is found, the leak shall be repaired as soon as practicable but not later than the time frame specified in Table 3 of this rule.
- An operator shall initially inspect a PRD that releases to the atmosphere as soon as practicable but not later than 24 hours after the discovery of the release. An operator shall re-inspect the PRD not earlier than 24 hours after the initial inspection but not later than 15 calendar days after the initial inspection.
- An operator shall inspect all new, replaced, or repaired fittings, flanges, and threaded connections within 72 hours of placing the component in service.
- An operator shall inspect a component, except for a PRD that releases to the atmosphere, that has been repaired or replaced not later than 15 calendar days after the component was repaired or replaced.

- An operator shall inspect all unsafe-to-monitor components during each turnaround.
- If the leaking component is an essential component or a critical component that cannot be immediately shut down for repairs, and if the leak has been minimized but the leak still exceeds the applicable leak standard of this rule, the operator shall repair or replace the essential component or critical component to eliminate the leak during the next process unit turnaround, but in no case later than one year from the date of the original leak detection, whichever comes earlier.

Section 6.1, Recordkeeping and Submissions

Section 6.1 requires that an operator shall maintain the records required by Sections 6.1 and 6.2 for a period of five (5) years. These records shall be made available to the APCO, ARB, and EPA upon request. Therefore, the following condition will be listed on the to ensure compliance:

- All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rule 1070]

Section 6.1.1 requires that the operator of any steam-enhanced crude oil production well shall maintain records of the date and well identification where steam injection or well stimulation occurs. Therefore, the following condition will be listed on the ATC to ensure compliance:

- The operator shall maintain monitoring records of the date and well identification where steam injection or well stimulation occurs. [District Rule 4401]

Section 6.1.2 states that a small producer shall maintain monthly records of county-specific crude oil production. For the purpose of this rule, the monthly crude oil production records required by the California Division of Oil, Gas, and Geothermal Resources may be used to satisfy Section 6.1.2. This facility is not a "Small Producer"; therefore this Section of the Rule is not applicable and no further discussion is required.

Section 6.1.3 states that an operator of any steam-enhanced crude oil production well shall keep source test records which demonstrate compliance with the control efficiency requirements of the VOC collection and control system as defined in Section 3.0. Therefore, the following condition will be listed on the ATC ensure compliance:

- The operator shall test records of demonstrating compliance with the control efficiency requirements of the VOC collection and control system. [District Rule 4401]

Section 6.1.4 requires that an inspection log shall be maintained pursuant to Section 6.4. Therefore, the following condition will be listed on the ATC ensure compliance:

- Permittee shall maintain an inspection log which includes the following information: 1) the total number of components inspected and the total number and percentage of leaking components found by component type, 2) the location, type, and name or description of each leaking component and description of any unit where the leaking component is found, 3) the date and method of leak detection, 4) the size of the leak

(in ppmv for gaseous leaks, and major or minor for liquid leaks), 5) the date the leaking component is repaired, replaced, or removed from service, 6) the identity and location of essential or critical components found leaking that cannot be repaired until the next regular process unit turnaround or not later than one year after leak detection, whichever comes later, 7) the methods used to minimize the leak from essential or critical components, 8) the date of re-inspection and the leak concentration (in ppmv) after the component is repaired or replaced, 9) the inspector's name, mailing address, and business telephone number, and 10) the date and signature of the facility operator responsible for the inspection and repair program certifying the accuracy of the information recorded in the log. [District Rule 4401]

Section 6.1.5 requires records of each calibration of the portable hydrocarbon detection instrument utilized for inspecting components, including a copy of current calibration gas certification from the vendor of said calibration gas cylinder, the date of calibration, concentration of calibration gas, instrument reading of calibration gas before adjustment, instrument reading of calibration gas after adjustment, calibration gas expiration date, and calibration gas cylinder pressure at the time of calibration. Therefore, the following condition will be listed on the ATC to ensure compliance:

- Records shall be maintained of each calibration of the portable hydrocarbon detection instrument utilized for inspecting components. The records shall include a copy of the current calibration gas certification from the vendor of the calibration gas cylinder, the date of calibration, the concentration of calibration gas, the instrument reading of calibration gas before adjustment, the instrument reading of calibration gas after adjustment, the calibration gas expiration date, and the calibration gas cylinder pressure at the time of calibration. [District Rule 4401]

Section 6.1.6 requires an operator shall maintain copies at the facility of the training records of the training program operated pursuant to Section 6.5. Therefore, the following condition will be listed on ATCs S-1326-35-11 and S-1326-287-9 to ensure compliance:

- Permittee shall establish and implement an employee training program for inspecting and repairing components and recordkeeping procedures, as necessary. Permittee shall maintain at the facility the copies of the training records of the training program. [District Rule 4401, 6.1.7 and 6.5]

Section 6.1.7 requires an operator shall keep a copy of the APCO-approved Operator Management Plan at the facility. Therefore, the following condition will be listed on the ATC to ensure compliance:

- Permittee shall maintain a copy of the latest APCO-approved Operator Management Plan (OMP) at the facility and make it available to the APCO, ARB, and US EPA upon request. [District Rule 4401]

Sections 6.1.9, 6.1.10, and 6.1.10 specify requirements for gauge tanks. This permit covers thermally enhanced oil recovery wells and does not include any gauge tanks. Therefore, the

requirements of these sections are not applicable to this operation and no further discussion is required.

Section 6.2, Compliance Source Testing

Section 6.2.1 requires that an operator source test annually all vapor collection and control systems used to control emissions from steam-enhanced crude oil production well vents to determine control efficiency of the device(s) used for destruction or removal of VOC. Compliance testing shall be performed annually by source testers certified by ARB. Testing shall be performed during June, July, August, or September of each year if the system's control efficiency is dependent upon ambient air temperature.

Section 6.2.2 states that the APCO may waive the annual testing requirement of Section 6.2.1 if all uncondensed VOC emissions collected by a vapor collection and control system are incinerated in fuel burning equipment, an internal combustion engine or in a smokeless flare.

Section 6.2.3 states that the compliance source testing requirements for gauge tanks. This permit covers thermally enhanced oil recovery wells and does not include any gauge tanks. Therefore, the requirements of these sections are not applicable to this operation and no further discussion is required.

Section 6.3, Test Methods

Section 6.3.2 requires that the VOC content shall be shall be analyzed by using the latest revision of ASTM Method E168, E169, or E260 as applicable. Analysis of halogenated exempt compounds shall be analyzed by CARB Method 432. Vintage is not required to measure the VOC content of the liquids or gases processed by this tank vapor control system operation. Therefore, the requirements of this section are not applicable and no further discussion is required.

Section 6.3.3 specifies that leak detection shall be performed with a portable hydrocarbon detection instrument in accordance with EPA Method 21. Where safety is a concern, such as measuring leaks from compressor seals or pump seals when the shaft is rotating, a person shall measure leaks by placing the instrument probe inlet at a distance of one (1) centimeter or less from the surface of the component interface. Therefore, the following condition will be listed on the ATC to ensure compliance:

- The operator shall perform leak inspections at least annually, using a portable hydrocarbon detection instrument in accordance with USEPA Method 21. Where safety is a concern, such as measuring leaks from compressor seals or pump seals when the shaft is rotating, a person shall measure leaks by placing the instrument probe inlet at a distance of one centimeter or less from the surface of the component interface. [District Rule 4401]

Section 6.3.4 specifies that for the purpose of Section 4.6.2, the VOC mass emission rate shall be determined according to the procedures described in the document USEPA-909/9-81-003, September 1981, entitled "Assessment of VOC Emissions from Well Vents Associated with Thermally Enhanced Oil Recovery". Vintage owns and operates more than 10 wells at this

stationary source. Therefore, they are not subject to the requirements of Section 4.6.2 and the requirements of this section are not applicable. No further discussion is required.

Compliance with all applicable provisions of the rule is expected.

California Health & Safety Code 42301.6 (School Notice)

The District has verified that this site is not located within 1,000 feet of a school. Therefore, pursuant to California Health and Safety Code 42301.6, a school notice is not required.

California Environmental Quality Act (CEQA)

CEQA requires each public agency to adopt objectives, criteria, and specific procedures consistent with CEQA Statutes and the CEQA Guidelines for administering its responsibilities under CEQA, including the orderly evaluation of projects and preparation of environmental documents. The District adopted its *Environmental Review Guidelines* (ERG) in 2001. The basic purposes of CEQA are to:

- Inform governmental decision-makers and the public about the potential, significant environmental effects of proposed activities;
- Identify the ways that environmental damage can be avoided or significantly reduced;
- Prevent significant, avoidable damage to the environment by requiring changes in projects through the use of alternatives or mitigation measures when the governmental agency finds the changes to be feasible; and
- Disclose to the public the reasons why a governmental agency approved the project in the manner the agency chose if significant environmental effects are involved.

The District performed an Engineering Evaluation (this document) for the proposed project and determined that all project specific emission unit(s) are exempt from Best Available Control Technology (BACT) requirements. Furthermore, the District has determined that potential emission increases would have a less than significant health impact on sensitive receptors.

Issuance of permits for emissions units not subject to BACT requirements and with health impact less than significant is a matter of ensuring conformity with applicable District rules and regulations and does not require discretionary judgment or deliberation. Thus, the District concludes that this permitting action constitutes a ministerial approval. Section 21080 of the Public Resources Code exempts from the application of CEQA those projects over which a public agency exercises only ministerial approval. Therefore, the District finds that this project is exempt from the provisions of CEQA.

IX. Recommendation

The following Permit shield conditions are on the current Permit. These conditions are outdated and no longer are required. Per District practice they will be removed from the Current ATC:

- 50. Compliance with permit conditions in the Title V permit shall be deemed compliance with Kern County Rule 108.1. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Y

- 51. Compliance with permit conditions in the Title V permit shall be deemed compliance with SJVUAPCD Rule 4401 (Amended December 14, 2006), excluding sections 5.1 and 5.2 for control systems which have been waived from complying with the requirement of section 6.2.1. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Y

- 52. {2459} The requirements of District Rule 4407 (Adopted May 19, 1994) do not apply to this permit unit because it is not an in situ combustion well vent. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Y

Compliance with all applicable rules and regulations is expected. Pending a successful Rule 2520 Public Noticing period, issue ATC S-1326-35-13 subject to the permit conditions on the attached draft ATC in **Appendix G**.

X. Billing Information

Annual Permit Fees			
Permit Number	Fee Schedule	Fee Description	Annual Fee
S-1326-35-13	3020-09-A	Wells – Large Producer	$2335.00

Appendixes

A: Current PTO
B: CO_2E Emissions Calculations
C: Quarterly Net Emissions Change
D: HRA Summary
E: Compliance Certification
F: Emission Profile
G: Draft ATC

APPENDIX A
Current PTO

San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: S-1326-35-12 **EXPIRATION DATE:** 03/31/2016

SECTION: 14 **TOWNSHIP:** 28S **RANGE:** 27E

EQUIPMENT DESCRIPTION:
THERMALLY ENHANCED OIL RECOVERY OPERATION WITH WELL VENT VAPOR CONTROL SYSTEM SERVING 150 STEAM ENHANCED WELLS, INCLUDING 50 HP COMPRESSOR, ONE AIR-COOLED VAPOR CONDENSER, AND PIPING TO FIELD FUEL GAS SYSTEM, DOGGR DISPOSAL WELL, AND/OR 3.6 MMBTU/HR KALDAIR FLARE INCLUDING TWO 8000 LB SULFATREAT CANISTERS (ONE AS BACKUP) (SECTION 14 YOUNG)

PERMIT UNIT REQUIREMENTS

1. TEOR operation shall include 50 hp compressor, one air-cooled vapor condenser, piping to field fuel gas system, DOGGR disposal well, and flare. (SECTION 14 Young). [District Rule 2201] Federally Enforceable Through Title V Permit
2. Wells may be operated with closed casing vents or be vented to vapor control system. [District Rule 2201] Federally Enforceable Through Title V Permit
3. Collected vapors shall discharge to H2S scrubber prior to vapor combustion in flare or in steam generators S-1326-9, '-294, '-314, '-337, and '-338. [District NSR Rule] Federally Enforceable Through Title V Permit
4. Sulfur scrubber shall be monitored monthly for H2S content of gas after treatment to determine when recharging is required. [District NSR Rule and District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
5. Sulfur content of gas combusted in flare shall not exceed 1 gr/100 scf. [District NSR Rule, District Rule 4801, and Kern County Rule 407] Federally Enforceable Through Title V Permit
6. Permittee shall test annually the sulfur content of gas combusted in flare using ASTM method D1072, D3031, D4084, or D3246 and make test results readily available for District inspection. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
7. Flare shall operate with no visible emission in excess of 5% opacity. [District NSR Rule] Federally Enforceable Through Title V Permit
8. Maximum amount of gas (pilot and waste gas) combusted by flare shall not exceed 150.0 MMBtu/day. [District Rule 2201] Federally Enforceable Through Title V Permit
9. Emissions from the flare shall not exceed any of the following limits (based on total gas combusted): NOx (as NO2): 0.068 lb/MMBtu; PM10: 0.008 lb/MMBtu; CO: 0.37 lb/MMBtu; or VOC: 0.063 lb/MMBtu. [District Rule 2201] Federally Enforceable Through Title V Permit
10. The higher heating value of the flared gas shall be monitored at least quarterly. Measured higher heating value and quantity of gas flared shall be used to determine compliance with heat input limit. [District Rules 1070 and 2201] Federally Enforceable Through Title V Permit
11. The flare shall be operated according to the manufacturer's specifications, a copy of which shall be maintained on site. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

12. If this flare requires a pilot flame, then the flare shall be operated with a flame present at all times, and kept in operation when emissions may be vented to it. The presence of a flare pilot flame shall be monitored using a thermocouple or any other equivalent device to detect the presence of a flame. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
13. This flare shall be inspected every two weeks while in operation for visible emissions. If visible emissions are observed, corrective action shall be taken. If visible emissions continue, an EPA Method 9 test shall be conducted within 72 hours. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
14. This flare shall not be used as a leak control device as described in Rule 4403, 5.3.1, nor as a control device for any permit unit subject to NSPS, without modification of permit requirements to address 40 CFR 60.18. [District Rule 2520, 9.3.3] Federally Enforceable Through Title V Permit
15. A gas leak is defined as the detection of a concentration of total organic compounds, above background (measured in accordance with EPA Method 21) that exceeds the following values: 1) A major gas leak is a detection of greater than 10,000 ppmv as methane; and 2) A minor gas leak is a detection of 400 to 10,000 ppmv as methane for pressure relief devices (PRDs) and 2,000 to 10,000 for components other than PRDs. [District Rule 4401] Federally Enforceable Through Title V Permit
16. A liquid leak is defined as the dripping of VOC-containing liquid. A major liquid leak is a visible mist or a continuous flow of liquid that is not seal lubricant. A minor liquid leak is a liquid leak that is not a major liquid leak and drips liquid at a rate of more than three drops per minute, except for seal lubricant. [District Rule 4401] Federally Enforceable Through Title V Permit
17. Fluids produced from wells with closed vents shall be introduced only to production equipment served by vapor control system listed on tank S-1326-201 which is 99% efficient. [District NSR Rule] Federally Enforceable Through Title V Permit
18. Well vent vapors shall vent to the field fuel gas system, DOGGR approved injection wells, flare listed on this permit, or steam generators S-1326-9, '-294, '-314, '-337, and '-338. [District Rule 2201] Federally Enforceable Through Title V Permit
19. The crude oil production from wells associated with this permit unit shall not lie within 1000 feet of an air injection well used for in-situ combustion. [District Rule 4407, 2.0, 3.4, and 3.5] Federally Enforceable Through Title V Permit
20. All required source testing shall conform to the compliance testing procedures described in District Rule 1081(as amended December 16, 1993). [District Rule 1081] Federally Enforceable Through Title V Permit
21. Permittee shall keep the steam-enhanced crude oil production well vents closed and the front line production equipment downstream of the wells that carry produced fluids (crude oil or mixture of crude oil and water) shall be connected to a VOC collection and control system. The well vent may be temporarily opened during periods of attended service or repair of the well provided such activity is done as expeditiously as possible with minimal spillage of material and VOC emissions to the atmosphere. [District Rule 4401] Federally Enforceable Through Title V Permit
22. During the time any steam-enhanced crude oil production well is undergoing service or repair while the well is not producing, it shall be exempt from the emission control requirements of District Rule 4401, 5.0 (as amended December 14, 2006). [District Rule 4401, 4.1] Federally Enforceable Through Title V Permit
23. The uncontrolled VOC emissions from any well vent shall be reduced by at least 99 percent by weight or, if several steam-enhanced crude oil production well vents are connected to a vapor collection and control system, total uncontrolled VOC emissions shall be reduced by at least 99 percent. This requirement does not apply to cyclic wells located on contiguous and adjacent oil production properties with less than 10 cyclic wells owned by or under the control of a company. [District Rule 4401, 5.1 and 5.2] Federally Enforceable Through Title V Permit
24. For cyclic wells located on properties with less than 10 cyclic wells and owned by a company, the uncontrolled VOC emissions from any well vent or system of well vents connected to a single control device shall be reduced by at least 50 percent. Properties shall include contiguous and adjacent oil production properties owned by or under control of the company. [District Rule 4401, 5.4] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

25. Total number of leaks from the vapor collection and control system, including condensate handling, shall not exceed the number as allowed by Rule 4401 (as amended December 14, 2006) at any one time. [District Rule 4401, 5.3] Federally Enforceable Through Title V Permit

26. Operator shall affix a readily visible tag bearing the date on which a leak is detected. The tag shall remain in place until the leaking component is repaired. [District Rule 4401, 5.3.1] Federally Enforceable Through Title V Permit

27. Operator shall maintain all components of a well vent vapor collection and control system in good repair. Components of the well vent vapor collection and control system shall include all piping, valves, fittings, pumps, compressors, tanks, etc. used to collect, control, store, or dispose of VOC condensate or non-condensable VOCs and which is prior to any blending of VOC condensate with crude oil or blending of non-condensable VOCs with gases to be used as a fuel. [District Rule 4401, 5.3 and 5.3.2] Federally Enforceable Through Title V Permit

28. Annual control efficiency compliance tests shall be performed on all vapor collection and control systems used to control emissions from steam-enhanced crude oil production wells. Testing shall be performed by source tester certified by the California Air Resource Board (CARB) certified contractors during June, July, August or September of each year if the system's control efficiency is dependent upon ambient air temperature. The APCO may waive the requirements of this condition if the vapor control system does not exhaust to atmosphere or if all uncondensed VOC emissions collected by a vapor collection and control system are burned in fuel burning equipment or in a smokeless open flare and the source's Operating Permit contains adequate periodic monitoring to ensure the source meets 99% control efficiency. [District Rule 4401, 5.1, 5.2 and 6.2.1] Federally Enforceable Through Title V Permit

29. The control efficiency of the vapor collection and control system used to control VOC emissions from steam enhanced crude oil production well shall be determined by mass balance based on most stringent of a source test, USEPA approved emission factors, or Air Pollution (AP)-42 emission factors for components; and the efficiency of destruction devices determined by USEPA Method 25, 25a, or 25b as applicable. [District Rule 4401, 6.3.1] Federally Enforceable Through Title V Permit

30. Permittee shall perform leak inspections at least annually, using a portable hydrocarbon detection instrument in accordance with USEPA Method 21. Where safety is a concern, such as measuring leaks from compressor seals or pump seals when the shaft is rotating, a person shall measure leaks by placing the instrument probe inlet at a distance of one centimeter or less from the surface of the component interface. [District Rules 2520, 9.3.2 and 4401] Federally Enforceable Through Title V Permit

31. The permittee shall not use any components that leak in excess of the applicable leak standards as specified in this permit. Components that have been found leaking in excess of the applicable leak standards of this rule may be used provided such leaking components have been identified with a tag for repair, are repaired, or are awaiting re-inspection after being repaired, within the applicable time period specified in this permit. [District Rule 4401] Federally Enforceable Through Title V Permit

32. Permittee shall maintain a copy of the latest APCO-approved Operator Management Plan (OMP) at the facility and make it available to the APCO, ARB, and US EPA upon request. [District Rule 4401] Federally Enforceable Through Title V Permit

33. By January 30 of each year, permittee shall submit to the APCO for approval, in writing, an annual report indicating any changes to the existing, approved OMP. [District Rule4401] Federally Enforceable Through Title V Permit

34. During District compliance inspection, the following conditions shall be used to determination of a violation: 1) Existence of an open-ended line or a valve located at the end of the line that is not sealed with a blind flange, plug, cap, or a second closed valve that is not closed at all times, except during attended operations requiring process fluid flow through the open-ended lines. Attended operations include draining or degassing operations, connection of temporary process equipment, sampling of process streams, emergency venting, and other normal operational needs, provided such operations are done as expeditiously as possible and with minimal spillage of material and VOC emissions to the atmosphere; 2) Existence of a component with a major liquid leak; 3) Existence of a component with a gas leak greater than 50,000 ppmv; or 4) Existence of a component leak consisting of a minor liquid or gas leak, or a gas leak greater than 10,000 ppmv up to 50,000 ppmv, in excess of the allowable number of leaks specified in Table 3 of Rule 4401. [District Rule 4401] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

35. Permittee shall keep all hatches closed at all times except during sampling or adding of process material through the hatch, or during attended repair, replacement, or maintenance operations, provided such activities are done as expeditiously as possible with minimal spillage of material and VOC emissions to the atmosphere. [District Rule 4401] Federally Enforceable Through Title V Permit

36. Except for pipes and unsafe-to-monitor components, permittee shall visually inspect all pipes at least once every year. Any visual inspection of pipes that indicates a leak that cannot be immediately repaired to meet the leak standards of Rule 4401 shall be inspected within 24 hours after detecting the leak. If a leak is found, the leak shall be repaired as soon as practicable but not later than the time frame specified in Table 4 of Rule 4401. [District Rule 4401] Federally Enforceable Through Title V Permit

37. Permittee shall inspect all unsafe-to-monitor components during each turnaround. [District Rule 4401] Federally Enforceable Through Title V Permit

38. Permittee shall inspect audio-visually (by hearing and by sight) for leaks all accessible operating pumps, compressors, and pressure relief devices (PRDs) in service at least once each calendar week. [District Rule 4401] Federally Enforceable Through Title V Permit

39. Any audio-visual inspection of an accessible operating pump, compressor, and PRD performed by an operator that indicates a leak that cannot be immediately repaired to meet the leak standards of Rule 4401 shall be inspected not later than 24 hours after conducting the audio-visual inspection. If a leak is found, the leak shall be repaired as soon as practicable but not later than the time frame specified in Table 4 of Rule 4401. [District Rule 4401] Federally Enforceable Through Title V Permit

40. Permittee shall initially inspect a PRD that releases to the atmosphere as soon as practicable but not later than 24 hours after the discovery of the release. Permittee shall re-inspect the PRD not earlier than 24 hours after the initial inspection but not later than 15 calendar days after the initial inspection. [District Rule 4401] Federally Enforceable Through Title V Permit

41. Permittee shall inspect all new, replaced, or repaired fittings, flanges, and threaded connections within 72 hours of placing the component in service. [District Rule 4401] Federally Enforceable Through Title V Permit

42. Except for PRDs, permittee shall inspect a component that has been repaired or replaced not later than 15 calendar days after the component was repaired or replaced. [District Rule 4401] Federally Enforceable Through Title V Permit

43. Permittee shall affix a readily visible weatherproof tag to a leaking component upon detection of the leak. The following information shall be included on the tag: 1) the date and time of leak detection; 2) the date and time of leak measurement; 3) leak concentration in ppmv for a gaseous leak; 4) description of whether it is a major liquid leak or a minor liquid leak; and 5) whether the component is an essential component, an unsafe-to-monitor component, or a critical component. [District Rule 4401] Federally Enforceable Through Title V Permit

44. Permittee shall keep the tag affixed to the component until all of the following conditions have been met: 1) the leaking component has been repaired or replaced, and 2) the component has been re-inspected using the test methods described in this permit; and 3) the component is found to be in compliance with the requirements of Rule 4401. [District Rule 4401] Federally Enforceable Through Title V Permit

45. Permittee shall minimize a component leak in order to stop or reduce leakage to the atmosphere immediately to the extent possible, but not later than one (1) hour after detection of the leak. [District Rule 4401] Federally Enforceable Through Title V Permit

46. Except for leaking critical components or leaking essential components, if the operator has minimized a leak but the leak still exceeds the applicable leak limits, the operator shall comply with at least one of the following requirements as soon as practicable but not later than the time period specified in Table 4 of Rule 4401: 1) repair or replace the leaking component; 2) vent the leaking component to a VOC collection and control system; or 3) remove the leaking component from operation. [District Rule 4401] Federally Enforceable Through Title V Permit

47. The leak rate, measured after leak minimization has been performed, shall be used to determine the applicable repair period specified in Table 4 of Rule 4401 and the time of initial leak detection shall be the start of the repair period specified in Table 4 of Rule 4401. [District Rule 4401] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

48. If the leaking component is an essential component or a critical component that cannot be immediately shut down for repairs, and if the leak has been minimized but the leak still exceeds the applicable leak standard of this rule, the operator shall repair or replace the essential component or critical component to eliminate the leak during the next process unit turnaround, but in no case later than one year from the date of the original leak detection, whichever comes earlier. [District Rule 4401] Federally Enforceable Through Title V Permit

49. Permittee shall maintain an inspection log in which, at a minimum, all of the following information shall be recorded for each inspection performed: 1) The total number of components inspected, and the total number and percentage of leaking components found by component type; 2) The location, type, and name or description of each leaking component and description of any unit where the leaking component is found; 3) The date of leak detection and the method of leak detection; 4) For gaseous leaks, the leak concentration in ppmv, and for liquid leaks record whether the leak is a major liquid leak or a minor liquid leak; 5) The date of repair, replacement, or removal from operation of leaking components; 6) The identify and location of essential components and critical components found leaking that cannot be repaired until the next process unit turnaround or not later than one year after leak detection, whichever comes earlier; 7) The methods used to minimize the leak from essential components and critical components found leaking that cannot be repaired until the next process unit turnaround or not later than one year after leak detection, whichever comes earlier; 8) The date of re-inspection and the leak concentration in ppmv after the component is repaired or is replaced; 9) The inspector's name, business mailing address, and business telephone number; and 10) The date and signature of the facility operator responsible for the inspection and repair program certifying the accuracy of the information recorded in the log. [District Rule 4401] Federally Enforceable Through Title V Permit

50. Compliance with permit conditions in the Title V permit shall be deemed compliance with Kern County Rule 108.1. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

51. Compliance with permit conditions in the Title V permit shall be deemed compliance with SJVUAPCD Rule 4401 (Amended December 14, 2006), excluding sections 5.1 and 5.2 for control systems which have been waived from complying with the requirement of section 6.2.1. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

52. The requirements of District Rule 4407 (Adopted May 19, 1994) do not apply to this permit unit because it is not an in situ combustion well vent. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

53. Wells authorized by this permit shall comply with all applicable requirements of Rule 4401. [District Rule 4401] Federally Enforceable Through Title V Permit

54. Well head casing vent collection piping network shall be limited to 150 steam enhanced wells. [District NSR Rule] Federally Enforceable Through Title V Permit

55. Leaks shall be inspected and repaired as specified in Rule 4401. [District Rule 4401] Federally Enforceable Through Title V Permit

56. VOC content of well vent vapor gas shall not exceed 10% by weight. If the VOC content of the well vent vapor gas is less than 10% by weight for 8 consecutive quarterly samplings per District approved plan, sampling frequency shall only be required annually. Representative samples shall be collected during periods of normal operation and not be within 48 hours after routine maintenance or repair. Records of test shall be maintained for a period of five years and be made readily available for District inspection upon request. [District Rule 2201] Federally Enforceable Through Title V Permit

57. VOC content shall be determined using ASTM Method D1945, D3588, or EPA method 18. [District Rule 4401, 6.2.3] Federally Enforceable Through Title V Permit

58. Permittee shall establish and implement an employee training program for inspecting and repairing components and recordkeeping procedures, as necessary. Permittee shall maintain at the facility the copies of the training records of the training program. [District Rule 4401] Federally Enforceable Through Title V Permit

59. The operator shall maintain monitoring records of the date and well identification where steam injection or well stimulation occurs. [District Rule 4401, 6.1] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

60. The permittee shall keep accurate records of the amount of gas (pilot and waste gas) flared, H2S content and recharging dates, for a period of five years, and shall make such records available for District inspection upon request. [District NSR Rule] Federally Enforceable Through Title V Permit

61. Permittee shall maintain a current well roster of all wells served by collection system, and such roster shall be made readily available for District inspection upon request. [District Rule 2520, 9.3.2 and District Rule 1070] Federally Enforceable Through Title V Permit

62. Records shall be maintained of each calibration of the portable hydrocarbon detection instrument utilized for inspecting components. The records shall include a copy of the current calibration gas certification from the vendor of the calibration gas cylinder, the date of calibration, the concentration of calibration gas, the instrument reading of calibration gas before adjustment, the instrument reading of calibration gas after adjustment, the calibration gas expiration date, and the calibration gas cylinder pressure at the time of calibration. [District Rule 4401] Federally Enforceable Through Title V Permit

63. All records required by this permit shall be maintained and retained on-site for a minimum of five (5) years and made available for District, ARB, and EPA inspection upon request. [District Rule 4401] Federally Enforceable Through Title V Permit

APPENDIX B
CO_2E Emissions Calculations

Assumptions:

- *GHG emissions are stated as "CO_2 equivalent (CO_2e) which includes the global warming potential of methane and carbon dioxide emissions associated with gaseous fugitive emissions.*
- *Only direct GHG emissions [methane (CH_4) and carbon dioxide (CO_2)] are produced from the equipment/operation*
- *Fugitive CH_4 and CO_2 emissions will be reduced along with fugitive volatile organic compounds (VOCs) controls*
- *Fugitive gas is 50 % TOC (total organic compound), 31% of which is VOC (Rule 4401 Analysis Staff report assumption, 2006)*
- *Assuming TOC consists only of VOCs and GHG; then GHG is 69% of TOC*
- *The 69% GHG is broken down into approximately of 65.8% CH4 & 3.2% CO2 (projected using the ratio of CH4 (78.8%) to CO_2 (3.8%) content of production gas as listed in the API Compendium manual)*
- *Average TOC EF from EPA's Average Oil & Natural Gas Production Emission Factors (Table 6.12 API Compendium manual)*
- *GHG emissions are expressed in metric tons CO2e per well.*

Emissions Factors:

From: District's Best Performance Standard
Class: Thermally Enhanced Oil Recovery (TEOR) Wells
Category: Components subject or not to District Rule 4401

EF = 5.89E-3 Mtons/Day/Well

CO_2e = 100 wells x 5.89E-3 Mtons/Day/Well x 365 days/year
CO2e =215 Mtons/year

CO2e =215 Mtons/year / 0.9072 Mtons/short tons
CO2e =237 short tons/year

APPENDIX C
Quarterly Net Emissions Change (QNEC)

Quarterly Net Emissions Change (QNEC)

The Quarterly Net Emissions Change is used to complete the emission profile screen for the District's PAS database. The QNEC shall be calculated as follows:

QNEC = PE2 - PE1, where:

QNEC = Quarterly Net Emissions Change for each emissions unit, lb/qtr.
PE2 = Post Project Potential to Emit for each emissions unit, lb/qtr.
PE1 = Pre-Project Potential to Emit for each emissions unit, lb/qtr.

Using the values in Sections VII.C.2 and VII.C.6 in the evaluation above, quarterly PE2 and quarterly PE1 can be calculated as follows:

$PE2_{quarterly}$ = $PE2_{annual}$ ÷ 4 quarters/year
= 20,258 lb/year ÷ 4 qtr/year
= 5065 lb PM_{10}/qtr

$PE1_{quarterly}$= $PE1_{annual}$ ÷ 4 quarters/year
= 20,258 lb/year ÷ 4 qtr/year
= 5065 lb PM_{10}/qtr

Quarterly NEC [QNEC]			
	PE2 (lb/qtr)	PE1 (lb/qtr)	QNEC (lb/qtr)
NO_X	931	931	0
SO_X	867	867	0
PM_{10}	5065	5065	0
CO	110	110	0
VOC	37	37	0

APPENDIX D
HRA Summary

San Joaquin Valley Air Pollution Control District
Risk Management Review

To:	Steve Davidson – Permit Services
From:	Yu Vu – Technical Services
Date:	February 8, 2013
Facility Name:	Vintage Production California
Location:	Section 14, Township 28S, Range 27E
Application #(s):	S-1326-35-13
Project #:	S-1130231

A. RMR SUMMARY

RMR Summary			
Categories	**TEOR Operations (Unit 35-13)**	**Project Totals**	**Facility Totals**
Prioritization Score	5.64	5.64	5.83
Acute Hazard Index	0.00	0.00	0.00
Chronic Hazard Index	0.00	0.00	0.00
Maximum Individual Cancer Risk (10^{-6})	0.46	0.46	0.46
T-BACT Required?	**No**		
Special Permit Conditions?	**No**		

Proposed Permit Conditions

To ensure that human health risks will not exceed District allowable levels; the following permit conditions must be included for:

Unit # 35-13

No special conditions are required.

B. RMR REPORT

I. Project Description

Technical Services received a request on February 07, 2012, to perform a Risk Management Review for a proposed modification to a TEOR operation. The applicant is proposing to increase the TEOR well count for this unit by 100 wells.

II. Analysis

Technical Services performed a health risk assessment using the Toxic Fugitive Emissions from Oilfield Equipment spreadsheet. The cumulative prioritization scores were greater than 1.0, thus

modeling was conducted using the AERMOD model, with the parameters outlined below and meteorological data for 2005-2009 from Bakersfield to determine the dispersion factors (i.e., the predicted concentration or X divided by the normalized source strength or Q) for a receptor grid. Since the wells were spread out over a one mile by one mile grid, an adjustment was made such that the emissions would be emitted from a 50 meter x 50 meter area source. This is believed to be more representative of the actual situation.

Analysis Parameters Unit 35-13			
Source Type	Area	**Location Type**	Rural
X-Length (m)	50	**Closest Receptor (m)**	700
Y-Length (m)	50	**Type of Receptor**	Business
Release Height (m)	3.05	**Emission Rate (g/sec-m^2)**	0.0004

III. Conclusion

The acute and chronic indices are below 1.0 and the cancer risk factor associated with the project is less than 1.0 in a million. **In accordance with the District's Risk Management Policy, the project is approved without Toxic Best Available Control Technology (T-BACT).**

These conclusions are based on the data provided by the applicant and the project engineer. Therefore, this analysis is valid only as long as the proposed data and parameters do not change.

IV. Attachments

A. RMR request from the project engineer
B. Additional information from the applicant/project engineer
C. Toxic emissions summary
D. Prioritization score
E. Facility Summary

APPENDIX E
Compliance Certification

San Joaquin Valley
Unified Air Pollution Control District

TITLE V MODIFICATION - COMPLIANCE CERTIFICATION FORM

I. TYPE OF PERMIT ACTION (Check appropriate box)

[X] SIGNIFICANT PERMIT MODIFICATION
[ ] MINOR PERMIT MODIFICATION
[ ] ADMINISTRATIVE AMENDMENT

COMPANY NAME: VINTAGE PRODUCTION CA	FACILITY ID: S - 1326
1. Type of Organization:[X] Corporation [ ] Sole Ownership [ ] Government [ ] Partnership [ ] Utility	
2. Owner's Name:	
3. Agent to the Owner: Jerry Frost	

II. COMPLIANCE CERTIFICATION (Read each statement carefully and initial **all** circles for confirmation):

(SM) Based on information and belief formed after reasonable inquiry, the equipment identified in this application will continue to comply with the applicable federal requirement(s).

(SM) Based on information and belief formed after reasonable inquiry, the equipment identified in this application will comply with applicable federal requirement(s) that will become effective during the permit term, on a timely basis.

(SM) Corrected information will be provided to the District when I become aware that incorrect or incomplete information has been submitted.

(SM) Based on information and belief formed after reasonable inquiry, information and statements in the submitted application package, including all accompanying reports, and required certifications are true accurate and complete.

I declare, under penalty of perjury under the laws of the state of California, that the forgoing is correct and true:

Signature of Responsible Official

2/1/13
Date

Shawn M. Kerns

Name of Responsible Official (please print)

President and General Manager

Title of Responsible Official (please print)

APPENDIX F
Emission Profile

Application Emissions

Permit #: S-1326-35-13	**Last Updated**
Facility: VINTAGE PRODUCTION CALIFORNIA	02/18/2013 DAVIDSOS

Equipment Pre-Baselined: NO

	NOX	SOX	PM10	CO	VOC
Potential to Emit (lb/Yr):	3723.0	146.0	438.0	20258.0	3468.0
Daily Emis. Limit (lb/Day)	10.2	0.4	1.2	55.5	9.5
Quarterly Net Emissions Change (lb/Qtr)					
Q1:	0.0	0.0	0.0	0.0	0.0
Q2:	0.0	0.0	0.0	0.0	0.0
Q3:	0.0	0.0	0.0	0.0	0.0
Q4:	0.0	0.0	0.0	0.0	0.0
Check if offsets are triggered but exemption applies	N	N	N	N	N
Offset Ratio					
Quarterly Offset Amounts (lb/Qtr)					
Q1:					
Q2:					
Q3:					
Q4:					

APPENDIX G
Draft ATC

San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

DRAFT

PERMIT NO: S-1326-35-13 **ISSUANCE DATE:** DRAFT

LEGAL OWNER OR OPERATOR: VINTAGE PRODUCTION CALIFORNIA LLC
MAILING ADDRESS: 9600 MING AVE, SUITE 300
BAKERSFIELD, CA 93311

LOCATION: HEAVY OIL CENTRAL STATIONARY SOURCE
KERN COUNTY, CA

SECTION: 14 **TOWNSHIP:** 28S **RANGE:** 27E

EQUIPMENT DESCRIPTION:
MODIFICATION OF THERMALLY ENHANCED OIL RECOVERY OPERATION WITH WELL VENT VAPOR CONTROL SYSTEM SERVING 150 STEAM ENHANCED WELLS, INCLUDING 50 HP COMPRESSOR, ONE AIR-COOLED VAPOR CONDENSER, AND PIPING TO FIELD FUEL GAS SYSTEM, DOGGR DISPOSAL WELL, AND/OR 3.6 MMBTU/HR KALDAIR FLARE INCLUDING TWO 8000 LB SULFATREAT CANISTERS (ONE AS BACKUP) (SECTION 14 YOUNG): INCREASE THE WELL COUNT BY 100 WELLS TO 250 WELLS

CONDITIONS

1. {1830} This Authority to Construct serves as a written certificate of conformity with the procedural requirements of 40 CFR 70.7 and 70.8 and with the compliance requirements of 40 CFR 70.6(c). [District Rule 2201] Federally Enforceable Through Title V Permit
2. {1831} Prior to operating with modifications authorized by this Authority to Construct, the facility shall submit an application to modify the Title V permit with an administrative amendment in accordance with District Rule 2520 Section 5.3.4. [District Rule 2520, 5.3.4] Federally Enforceable Through Title V Permit
3. Fluids produced from wells with closed vents shall be introduced only to production equipment served by vapor control system listed on tank S-1326-201 which is 99% efficient. [District NSR Rule] Federally Enforceable Through Title V Permit
4. Well vent vapors shall vent to the field fuel gas system, DOGGR approved injection wells, flare listed on this permit, or steam generators S-1326-9, '-294, '-314, '-337, and '-338. [District Rule 2201] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

YOU MUST NOTIFY THE DISTRICT COMPLIANCE DIVISION AT (661) 392-5500 WHEN CONSTRUCTION IS COMPLETED AND PRIOR TO OPERATING THE EQUIPMENT OR MODIFICATIONS AUTHORIZED BY THIS AUTHORITY TO CONSTRUCT. This is NOT a PERMIT TO OPERATE. Approval or denial of a PERMIT TO OPERATE will be made after an inspection to verify that the equipment has been constructed in accordance with the approved plans, specifications and conditions of this Authority to Construct, and to determine if the equipment can be operated in compliance with all Rules and Regulations of the San Joaquin Valley Unified Air Pollution Control District. Unless construction has commenced pursuant to Rule 2050, this Authority to Construct shall expire and application shall be cancelled two years from the date of issuance. The applicant is responsible for complying with all laws, ordinances and regulations of all other governmental agencies which may pertain to the above equipment.

Seyed Sadredin, Executive Director / APCO

DRAFT

DAVID WARNER, Director of Permit Services
S-1326-35-13 : Feb 27 2013 7:43AM -- DAVIDSOS : Joint Inspection NOT Required

5. Well head casing vent collection piping network shall be limited to 250 steam enhanced wells. [District NSR Rule] Federally Enforceable Through Title V Permit
6. Sulfur scrubber shall be monitored monthly for H2S content of gas after treatment to determine when recharging is required. [District NSR Rule and District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
7. Sulfur content of gas combusted in flare shall not exceed 1 gr/100 scf. [District NSR Rule, District Rule 4801, and Kern County Rule 407] Federally Enforceable Through Title V Permit
8. Permittee shall test annually the sulfur content of gas combusted in flare using ASTM method D1072, D3031, D4084, or D3246 and make test results readily available for District inspection. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
9. Flare shall operate with no visible emission in excess of 5% opacity. [District NSR Rule] Federally Enforceable Through Title V Permit
10. Maximum amount of gas (pilot and waste gas) combusted by flare shall not exceed 150.0 MMBtu/day. [District Rule 2201] Federally Enforceable Through Title V Permit
11. Emissions from the flare shall not exceed any of the following limits (based on total gas combusted): NOx (as NO2): 0.068 lb/MMBtu; PM10: 0.008 lb/MMBtu; CO: 0.37 lb/MMBtu; or VOC: 0.063 lb/MMBtu. [District Rule 2201] Federally Enforceable Through Title V Permit
12. The higher heating value of the flared gas shall be monitored at least quarterly. Measured higher heating value and quantity of gas flared shall be used to determine compliance with heat input limit. [District Rules 1070 and 2201] Federally Enforceable Through Title V Permit
13. The flare shall be operated according to the manufacturer's specifications, a copy of which shall be maintained on site. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
14. If this flare requires a pilot flame, then the flare shall be operated with a flame present at all times, and kept in operation when emissions may be vented to it. The presence of a flare pilot flame shall be monitored using a thermocouple or any other equivalent device to detect the presence of a flame. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
15. This flare shall be inspected every two weeks while in operation for visible emissions. If visible emissions are observed, corrective action shall be taken. If visible emissions continue, an EPA Method 9 test shall be conducted within 72 hours. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
16. This flare shall not be used as a leak control device as described in Rule 4403, 5.3.1, nor as a control device for any permit unit subject to NSPS, without modification of permit requirements to address 40 CFR 60.18. [District Rule 2520, 9.3.3] Federally Enforceable Through Title V Permit
17. A gas leak is defined as the detection of a concentration of total organic compounds, above background (measured in accordance with EPA Method 21) that exceeds the following values: 1) A major gas leak is a detection of greater than 10,000 ppmv as methane; and 2) A minor gas leak is a detection of 400 to 10,000 ppmv as methane for pressure relief devices (PRDs) and 2,000 to 10,000 for components other than PRDs. [District Rule 4401] Federally Enforceable Through Title V Permit
18. A liquid leak is defined as the dripping of VOC-containing liquid. A major liquid leak is a visible mist or a continuous flow of liquid that is not seal lubricant. A minor liquid leak is a liquid leak that is not a major liquid leak and drips liquid at a rate of more than three drops per minute, except for seal lubricant. [District Rule 4401] Federally Enforceable Through Title V Permit
19. During the time any steam-enhanced crude oil production well is undergoing service or repair while the well is not producing, it shall be exempt from the emission control requirements of District Rule 4401, 5.0 (as amended December 14, 2006). [District Rule 4401] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

20. The following conditions shall be used to determination of a violation: 1) Existence of an open-ended line or a valve located at the end of the line that is not sealed with a blind flange, plug, cap, or a second closed valve that is not closed at all times, except during attended operations requiring process fluid flow through the open-ended lines. Attended operations include draining or degassing operations, connection of temporary process equipment, sampling of process streams, emergency venting, and other normal operational needs, provided such operations are done as expeditiously as possible and with minimal spillage of material and VOC emissions to the atmosphere; 2) Existence of a component with a major liquid leak; 3) Existence of a component with a gas leak greater than 50,000 ppmv; or 4) Existence of a component leak consisting of a minor liquid or gas leak, or a gas leak greater than 10,000 ppmv up to 50,000 ppmv, in excess of the allowable number of leaks specified in Table 3 of Rule 4401. [District Rule 4401] Federally Enforceable Through Title V Permit
21. Total number of leaks from the vapor collection and control system, including condensate handling, shall not exceed the number as allowed by Rule 4401 (as amended December 14, 2006) at any one time. [District Rule 4401] Federally Enforceable Through Title V Permit
22. Operator shall affix a readily visible tag bearing the date and time of leak detection, the date and time of leak measurement, the leak concentration of gaseous leaks (in ppmv), for liquid leaks whether it is a major liquid leak or a minor liquid leak, and whether the component is an essential component, an unsafe-to monitor component, or a critical component leak. [District Rule 4401] Federally Enforceable Through Title V Permit
23. The tag shall remain in place until the leaking component is repaired, re-inspected, using the test method in Section 6.3.3, and the component is found to be in compliance with the requirements of this rule. [District Rule 4401] Federally Enforceable Through Title V Permit
24. An operator shall minimize a component leak in order to stop or reduce leakage to the atmosphere immediately to the extent possible, but not later than one (1) hour after detection of the leak. [District Rule 4401] Federally Enforceable Through Title V Permit
25. Except for leaking critical components or leaking essential components, the operator shall repair each leak within time specified in Table 3, of Rule 4401. [District Rule 4401] Federally Enforceable Through Title V Permit
26. If the leaking component is an essential component or a critical component that cannot be immediately shut down for repairs, and if the leak has been minimized but the leak still exceeds the applicable leak standard of this rule, the operator shall repair or replace the essential component or critical component to eliminate the leak during the next process unit turnaround, but in no case later than one year from the date of the original leak detection, whichever comes earlier. [District Rule 4401] Federally Enforceable Through Title V Permit
27. The operator shall not use any components that leak in excess of the applicable leak standards as specified in this permit. Components that have been found leaking in excess of the applicable leak standards of this rule may be used provided such leaking components have been identified with a tag for repair, are repaired, or are awaiting re-inspection after being repaired, within the applicable time period specified in this permit. [District Rule 4401] Federally Enforceable Through Title V Permit
28. Each hatch shall be closed at all times except during sampling or adding of process material through the hatch, or during attended repair, replacement, or maintenance operations, provided such activities are done as expeditiously as possible with minimal spillage of material and VOC emissions to the atmosphere. [District Rule 4401] Federally Enforceable Through Title V Permit
29. Except for pipes and unsafe-to-monitor components, an operator shall inspect all other components pursuant to the requirements of Section 6.3.3 at least once every year [District Rule 4401] Federally Enforceable Through Title V Permit
30. An operator shall visually inspect all pipes at least once every year. Any visual inspection of pipes that indicates a leak that cannot be immediately repaired to meet the leak standards of this rule shall be inspected within 24 hours after detecting the leak. If a leak is found, the leak shall be repaired as soon as practicable but not later than the time frame specified in Table 3 of this rule. [District Rule 4401] Federally Enforceable Through Title V Permit
31. An operator shall audio-visually (by hearing and by sight) inspect for leaks all accessible operating pumps, compressors, and PRDs in service at least once each calendar week. [District Rule 4401] Federally Enforceable Through Title V Permit

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32. Any audio-visual inspection of an accessible operating pump, compressor, and PRD performed by an operator that indicates a leak that cannot be immediately repaired to meet the leak standards of this rule shall be inspected not later than 24 hours after conducting the audio-visual inspection. If a leak is found, the leak shall be repaired as soon as practicable but not later than the time frame specified in Table 3 of this rule. [District Rule 4401] Federally Enforceable Through Title V Permit

33. An operator shall initially inspect a PRD that releases to the atmosphere as soon as practicable but not later than 24 hours after the discovery of the release. An operator shall re-inspect the PRD not earlier than 24 hours after the initial inspection but not later than 15 calendar days after the initial inspection. [District Rule 4401] Federally Enforceable Through Title V Permit

34. An operator shall inspect all new, replaced, or repaired fittings, flanges, and threaded connections within 72 hours of placing the component in service. [District Rule 4401] Federally Enforceable Through Title V Permit

35. An operator shall inspect a component, except for a PRD that releases to the atmosphere, that has been repaired or replaced not later than 15 calendar days after the component was repaired or replaced. [District Rule 4401] Federally Enforceable Through Title V Permit

36. An operator shall inspect all unsafe-to-monitor components during each turnaround. [District Rule 4401] Federally Enforceable Through Title V Permit

37. The operator shall perform leak inspections at least annually, using a portable hydrocarbon detection instrument in accordance with USEPA Method 21. Where safety is a concern, such as measuring leaks from compressor seals or pump seals when the shaft is rotating, a person shall measure leaks by placing the instrument probe inlet at a distance of one centimeter or less from the surface of the component interface. [District Rule 4401] Federally Enforceable Through Title V Permit

38. VOC content of well vent vapor gas shall not exceed 10% by weight. If the VOC content of the well vent vapor gas is less than 10% by weight for 8 consecutive quarterly samplings per District approved plan, sampling frequency shall only be required annually. Representative samples shall be collected during periods of normal operation and not be within 48 hours after routine maintenance or repair. Records of test shall be maintained for a period of five years and be made readily available for District inspection upon request. [District Rule 2201] Federally Enforceable Through Title V Permit

39. The VOC content by weight percent (wt.%) shall be determined using American Society of Testing and Materials (ASTM) D1945 for gases and South Coast Air Quality Management District (SCAQMD) Method 304-91 or the latest revision of ASTM Method E168, E169 or E260 for liquids. [District Rule 4401] Federally Enforceable Through Title V Permit

40. Annual control efficiency compliance tests shall be performed on all vapor collection and control systems used to control emissions from steam-enhanced crude oil production wells. Testing shall be performed by source tester certified by the California Air Resource Board (CARB) certified contractors during June, July, August or September of each year if the system's control efficiency is dependent upon ambient air temperature. The APCO may waive the requirements of this condition if the vapor control system does not exhaust to atmosphere or if all uncondensed VOC emissions collected by a vapor collection and control system are burned in fuel burning equipment or in a smokeless open flare and the source's Operating Permit contains adequate periodic monitoring to ensure the source meets 99% control efficiency. [District Rule 4401] Federally Enforceable Through Title V Permit

41. The control efficiency of the vapor collection and control system used to control VOC emissions from steam enhanced crude oil production well shall be determined by mass balance based on most stringent of a source test, USEPA approved emission factors, or Air Pollution (AP)-42 emission factors for components; and the efficiency of destruction devices determined by USEPA Method 25, 25a, or 25b as applicable. [District Rule 4401] Federally Enforceable Through Title V Permit

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42. Permittee shall maintain an inspection log which includes the following information: 1) the total number of components inspected and the total number and percentage of leaking components found by component type, 2) the location, type, and name or description of each leaking component and description of any unit where the leaking component is found, 3) the date and method of leak detection, 4) the size of the leak (in ppmv for gaseous leaks, and major or minor for liquid leaks), 5) the date the leaking component is repaired, replaced, or removed from service, 6) the identity and location of essential or critical components found leaking that cannot be repaired until the next regular process unit turnaround or not later than one year after leak detection, whichever comes later, 7) the methods used to minimize the leak from essential or critical components, 8) the date of re-inspection and the leak concentration (in ppmv) after the component is repaired or replaced, 9) the inspector's name, mailing address, and business telephone number, and 10) the date and signature of the facility operator responsible for the inspection and repair program certifying the accuracy of the information recorded in the log. [District Rule 4401] Federally Enforceable Through Title V Permit

43. Records shall be maintained of each calibration of the portable hydrocarbon detection instrument utilized for inspecting components. The records shall include a copy of the current calibration gas certification from the vendor of the calibration gas cylinder, the date of calibration, the concentration of calibration gas, the instrument reading of calibration gas before adjustment, the instrument reading of calibration gas after adjustment, the calibration gas expiration date, and the calibration gas cylinder pressure at the time of calibration. [District Rule 4401] Federally Enforceable Through Title V Permit

44. The operator shall shall keep source test records which demonstrate compliance with the control efficiency requirements of the VOC collection and control system. [District Rule 4401] Federally Enforceable Through Title V Permit

45. Permittee shall establish and implement an employee training program for inspecting and repairing components and recordkeeping procedures, as necessary. Permittee shall maintain at the facility the copies of the training records of the training program. [District Rule 4401] Federally Enforceable Through Title V Permit

46. By January 30 of each year, permittee shall submit to the APCO for approval, in writing, an annual report indicating any changes to the existing, approved OMP. [District Rule4401] Federally Enforceable Through Title V Permit

47. Permittee shall maintain a copy of the latest APCO-approved Operator Management Plan (OMP) at the facility and make it available to the APCO, ARB, and US EPA upon request. [District Rule 4401] Federally Enforceable Through Title V Permit

48. {1297} The operator shall maintain monitoring records of the date and well identification where steam injection or well stimulation occurs. [District Rule 4401, 6.1] Federally Enforceable Through Title V Permit

49. The permittee shall keep accurate records of the amount of gas (pilot and waste gas) flared, H2S content and recharging dates, for a period of five years, and shall make such records available for District inspection upon request. [District Rule 2201] Federally Enforceable Through Title V Permit

50. Permittee shall maintain a current well roster of all wells served by collection system, and such roster shall be made readily available for District inspection upon request. [District Rule 2520, 9.3.2 and District Rule 1070] Federally Enforceable Through Title V Permit

51. All records required by this permit shall be maintained and retained on-site for a minimum of five (5) years and made available for District, ARB, and EPA inspection upon request. [District Rules 2201 and 4401] Federally Enforceable Through Title V Permit